MISSOURI State Freight & Rail Plan

ECONOMIC IMPACT OF THE *MISSOURI RIVER RUNNER* PASSENGER RAIL SERVICE

APRIL 2021

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ECONOMIC IMPACT OF AMTRAK'S MISSOURI RIVER RUNNER SERVICE

executive summary

Passenger rail service provides an option for connecting rural communities and smaller cities to major economic centers and promotes commerce and economic development, particularly in the areas surrounding stations. The Missouri River Runner Amtrak passenger train route operates two round trips per day across 283 miles of track between the Gateway Transportation Center in St. Louis and Union Station in Kansas City, providing connection to the Southwest Chief and Texas Eagle routes. The Missouri River Runner provides an alternative travel mode along the heavily traveled I-70 corridor between St. Louis and Kansas City.

The Missouri River Runner gives rise to significant benefits in Missouri through travel/transportation, reduced energy consumption, safety, and tourism/visitor spending.

2021 STATE FREIGHT AND RAIL PLAN

MoDOT

KEY FINDINGS

MISSOURI RIVER RUNNER BY THE NUMBERS

IN MISSOURI, THE TOTAL ANNUAL ECONOMIC IMPACTS GENERATED BY THE RIVER RUNNER INCLUDE:

1,250 JOBS ANNUALLY

$65 MILLION IN ANNUAL LABOR INCOME

$208 MILLION IN ANNUAL ECONOMIC ACTIVITY

MORE THAN **$22 MILLION** IN ANNUAL TAX REVENUE

Amtrak's business presence in Missouri supports local vendors and small businesses statewide.

In 2019, Amtrak spent $28.9 million to hire services from Missouri's construction, landscaping, railroad, engineering, and technology businesses.

Amtrak employs 78 people statewide, amounting to about $7.5 million in labor income.

Collectively, Amtrak's direct employment and spending in Missouri yields the following direct, indirect and induced economic benefits:

450 jobs | **$35.2M** in labor income | **$122.6M** in economic activity

& $11.3 MILLION in federal, state & local tax revenue.

82% OF MISSOURIANS live within **60 MILES** of a **PASSENGER RAIL STATION**

172,555 PASSENGERS rode the Missouri River Runner in **2018**, with an average fare of **$32.47** PER PASSENGER.

Missouri River Runner riders spend an estimated

$21.8M in hotels &

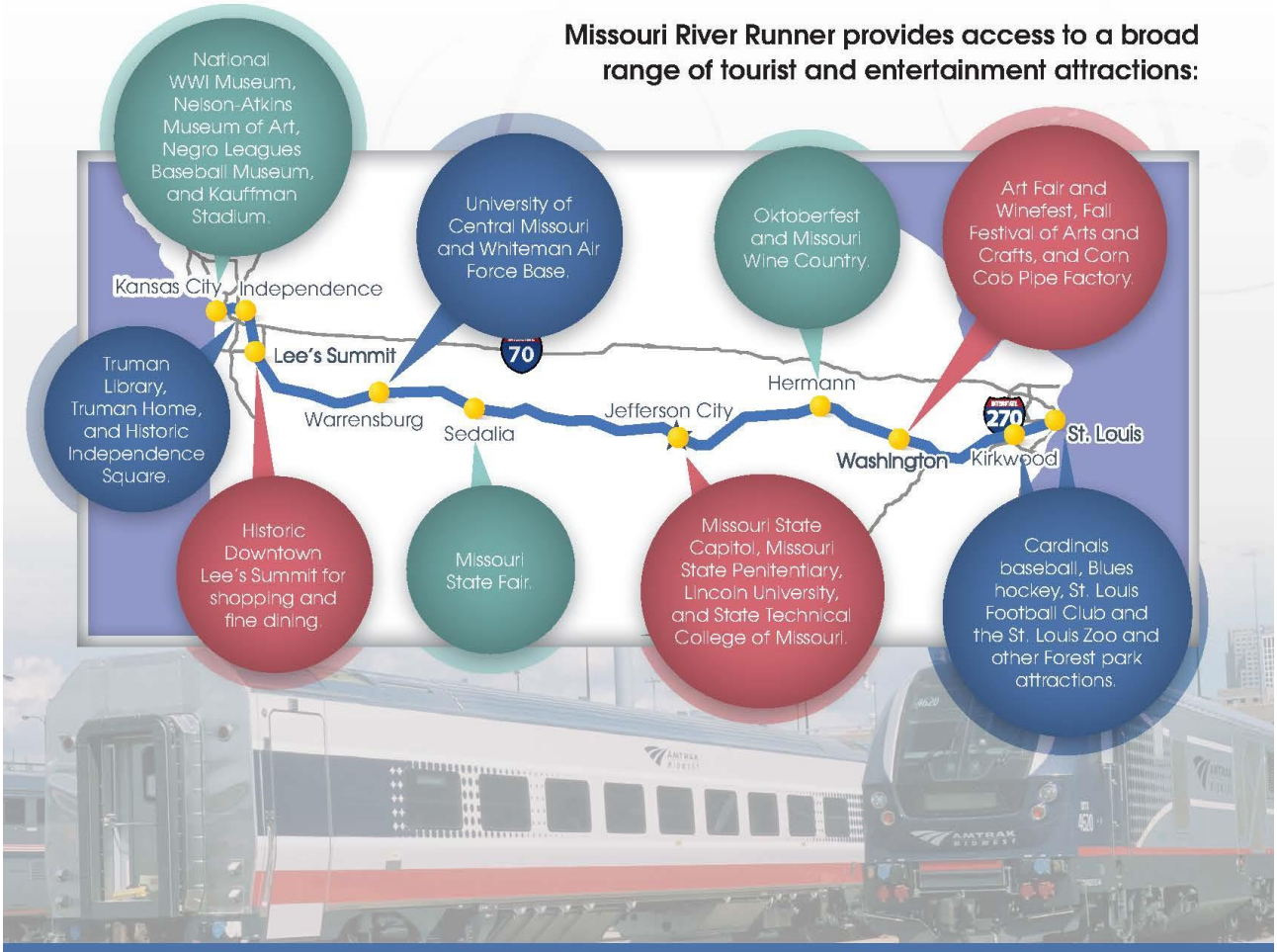
$25.3M in food & sightseeing costs

each year. This supports direct, indirect and induced economic benefits of

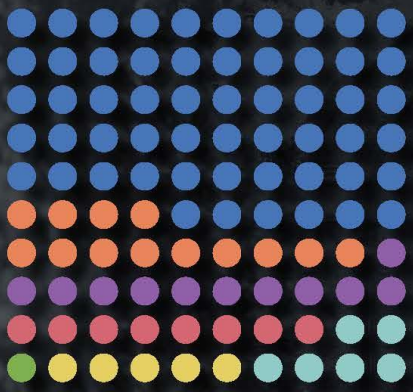
over **800** jobs | **$30M** in labor income | **$86M** in economic activity

& $11 MILLION in federal, state & local tax revenue.

MISSOURI RIVER RUNNER SERVICE SUPPORTS MISSOURIANS



WHY DO PEOPLE RIDE THE RIVER RUNNER?



- Visit family or friends - 56%
- Leisure or recreation - 13%
- Daily work commute or business travel - 11%
- Vacations - 8%
- Personal or family event (e.g., wedding, graduation) - 6%
- Travel to or from school - 5%
- Shopping - 1%

Key Takeaways

Many Missouri residents and visitors depend on non-highway modes of transportation.

Enhanced passenger rail service provides important economic development benefits to Missouri communities by improving accessibility, connectivity, and travel efficiency for both in-state and out-of-state travelers.

Missouri maintains existing Missouri River Runner service with relatively modest state appropriations. Missouri has no dedicated funding source for passenger rail. Funding is subject to legislative general revenue appropriation each year and this investment has not kept pace with inflation of the cost to operate the service. In FY 2021, MoDOT received $8 million in state support for the operation of River Runner service.

Infrastructure improvements to the St. Louis to Kansas City line have reduced delays and increased reliability. These improvements were funded primarily by federal sources, with contributions from the state and the railroads.

The Missouri River Runner service strengthens communities by providing connectivity amongst Missouri's cities, serving as an anchor to commercial and residential development and encouraging more efficient mobility options in the community.

MoDOT

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1.0 Introduction

The Missouri Department of Transportation is developing an integrated State Freight and Rail Plan which will focus on actionable policies, strategies and investments. MoDOT, its partners and its stakeholders are using data-driven, performance-based decision-making tools to design the plan. It will guide MoDOT's efforts to identify and target investments that will:

1. Sustain the state to maintain its competitive advantage;

2. Recognize the public and private costs and benefits of freight and passenger rail investments, which facilitates cost-sharing; and

3. Align with MoDOT's broader Long-Range Transportation Plan and economic development goals.

As part of this effort, MoDOT conducted an economic assessment of the *Missouri River Runner*, which provides a modal alternative along the heavily traveled I-70 corridor linking St. Louis and Kansas City, Missouri's two largest metropolitan regions. Sponsored by Missouri and operated by Amtrak, the *Missouri River Runner* service consists of two daily round trips along a 283-mile route utilizing tracks predominantly owned by Union Pacific Railroad.

In this evaluation, MoDOT examined the transportation, tourism and economic development impacts resulting from the *Missouri River Runner* service to better understand how the service supports Missouri residents, visitors and businesses through employment, labor income, economic output and state and local tax revenue. Furthermore, the analysis also takes into account safety and environmental impacts.

1.1 *Missouri River Runner* Background

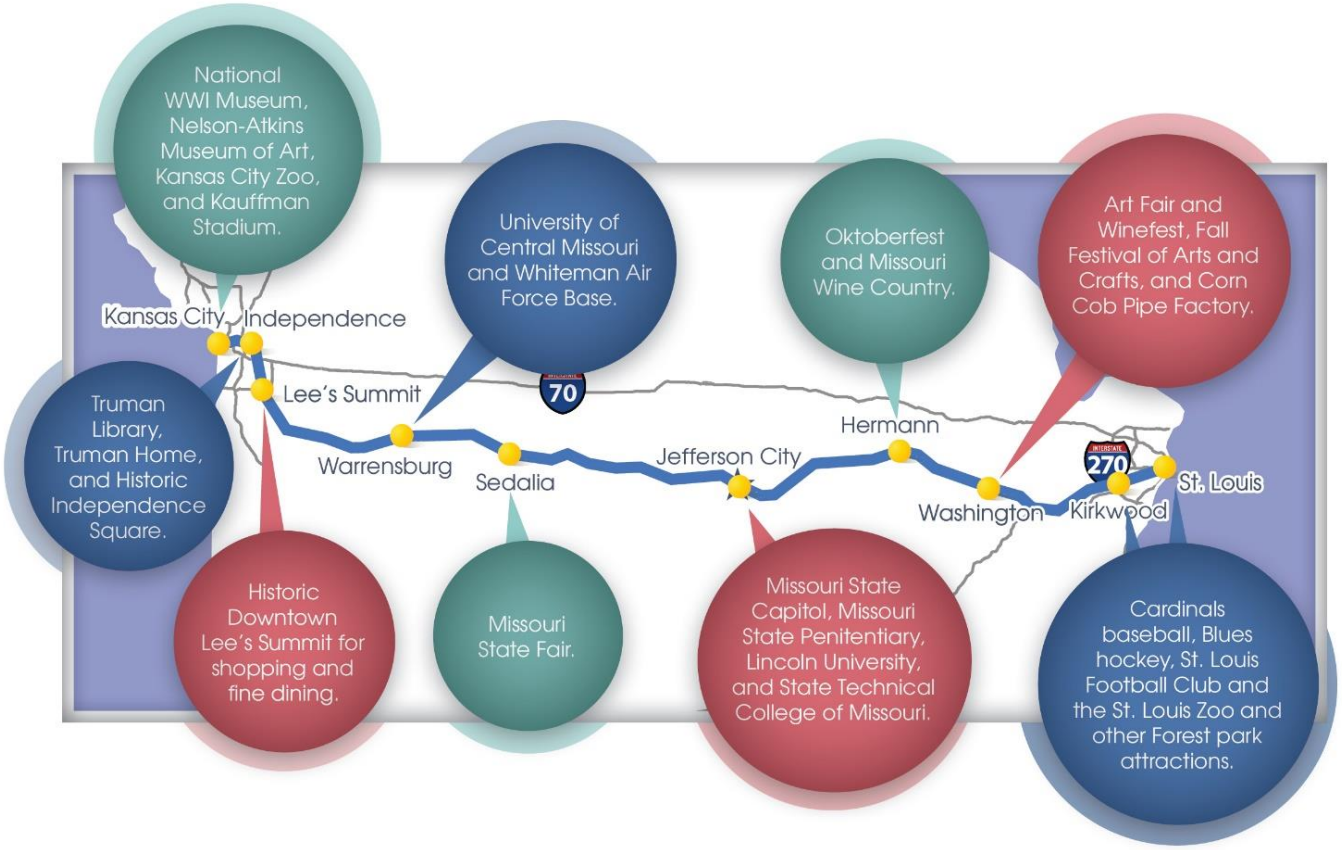
Passenger rail service provides an option for traveling between Missouri's urban and rural economic hubs and promotes commerce and economic development, particularly in the areas surrounding stations. The *Missouri River Runner* Amtrak passenger train route operates two round trips per day across 283 miles of track. The route operates between the Gateway Transportation Center in St. Louis and Union Station in Kansas City, providing connection to the *Southwest Chief* and *Texas Eagle* routes (see Figure 1.1). The *Missouri River Runner* provides an alternative travel mode along the heavily traveled I-70 corridor between St. Louis and Kansas City and gives rise to significant benefits in Missouri through travel/transportation, reduced energy consumption, safety and tourism/visitor spending.

FIGURE 1.1 MISSOURI AMTRAK PASSENGER RAIL ROUTES

Source: Cambridge Systematics.

As shown in Figure 1.2, the *Missouri River Runner* services 10 stations in the state. On the eastern end, the St. Louis Gateway Transportation Center serves as a multi-modal hub for intercity rail, intercity bus and local bus and light rail transit through the Civic Center Transfer Center, the central hub for transit in the St. Louis region. In addition to the *Missouri River Runner*, the station also hosts Illinois' Chicago-St. Louis *Lincoln* service and Amtrak's long-distance daily *Texas Eagle* route between Chicago, Illinois and San Antonio, Texas and a tri-weekly connection to Los Angeles. At Kansas City's Union Station, Amtrak's daily *Southwest Chief* offers connections to Los Angeles and Chicago, and the KC Streetcar offers connection to destinations in downtown Kansas City. These stations provide access and connectivity to many of the state's leading tourist and entertainment attractions.

FIGURE 1.2 *MISSOURI RIVER RUNNER* STATIONS AND KEY ATTRACTIONS IN MISSOURI



Source: Cambridge Systematics.

Ridership is key to the long-term vitality of passenger rail service. One of the primary factors affecting ridership is on-time performance.[1] Both OTP and ridership of the *Missouri River Runner* improved significantly between 2008 and 2011, as shown in Figure 1.3. In part, the construction of additional sidings (funded through federal grants with contributions from UP) that increased operational reliability along this busy freight corridor led to these improvements. Also favorably impacting OTP were provisions included in Sections 207 and 213 of the Passenger Rail Investment and Improvement Act of 2009, which strengthened enforcement of OTP standards for railroads hosting Amtrak service.[2] By 2013, *Missouri River Runner* ridership reached an all-time high of 197,000 passengers,

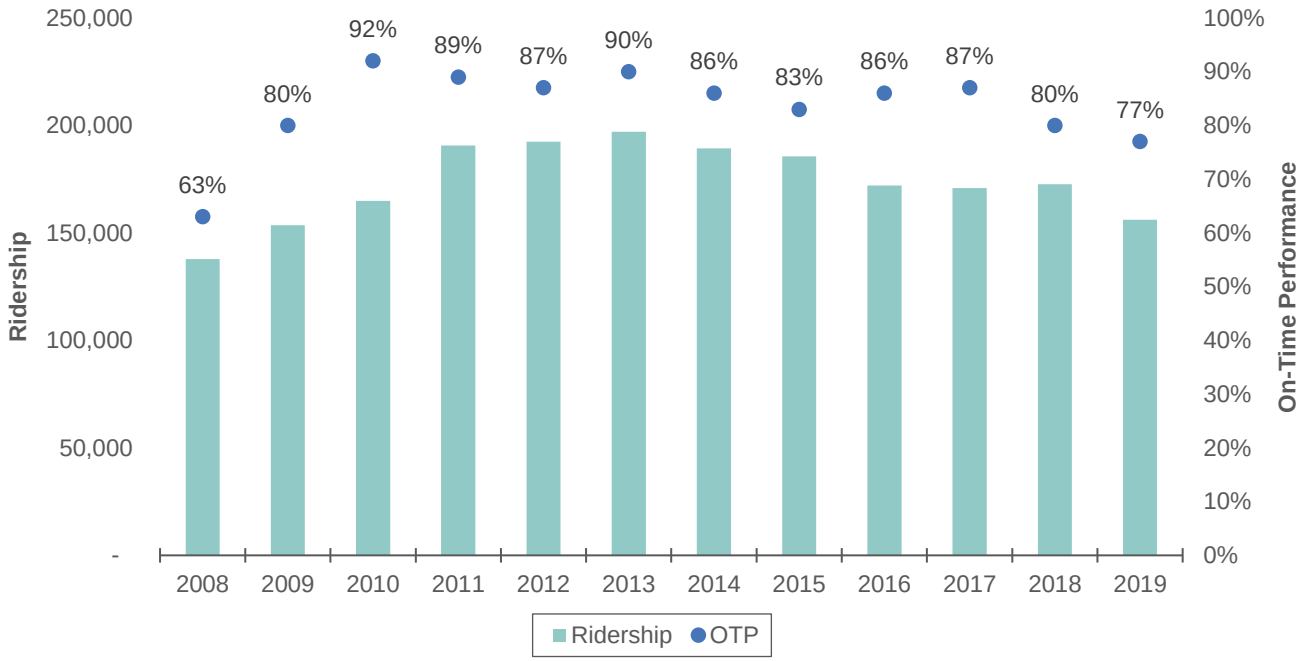
[1] Measurement of on-time performance for Amtrak services varies by the length of the trip. For trip lengths between 251-350 miles (which encompasses the entire *Missouri River Runner* route), trains are considered on-time if they arrive within 15 minutes or less of their scheduled arrival time. For shorter distances (0 – 250 miles), trains are on-time if they arrive within 10 minutes of their scheduled arrival time. More information available from: https://www.bts.gov/content/amtrak-time-performance-trends-and-hours-delay-cause

[2] By 2014, litigation between the railroad industry and the federal government resulted in the effective suspension of the OTP provisions in the Passenger Rail Investment and Improvement Act (PRIIA). However, from the data available, it is not evident to what extent *Missouri River Runner* OTP was affected. In mid-2020, the Federal Railroad Administration finalized metrics and minimum standards for OTP, more information available at: https://www.federalregister.gov/documents/2020/03/31/2020-06245/metrics-and-minimum-standards-for-intercity-passenger-rail-service

with the second-highest OTP in recent history at 90%. Subsequently, ridership began to fall, with ridership averaging around 172,000 during the years 2016-2018 and OTP declining modestly to mid-80%.

While the exact cause of ridership decline between 2013 and 2018 is unknown, the performance of the *Missouri River Runner* is linked with Illinois' *Lincoln Service,* the *Southwest Chief* at Kansas City and the *Texas Eagle* at St. Louis. Over 10% of *Missouri River Runner* passengers connect to and from these services, particularly the *Lincoln Service* in St. Louis. From 2012-2018, construction activity on the *Lincoln Service* route in Illinois caused frequent delays and cancellations that led to erratic service. Unfortunately, the *Missouri River Runner* has yet to realize likely gains in connecting traffic arising from these substantial infrastructure investments. Signaling system improvements required to achieve higher speeds and auto-competitive travel times between Chicago and St. Louis still await completion.

FIGURE 1.3 *MISSOURI RIVER RUNNER* RIDERSHIP VS. ON-TIME PERFORMANCE



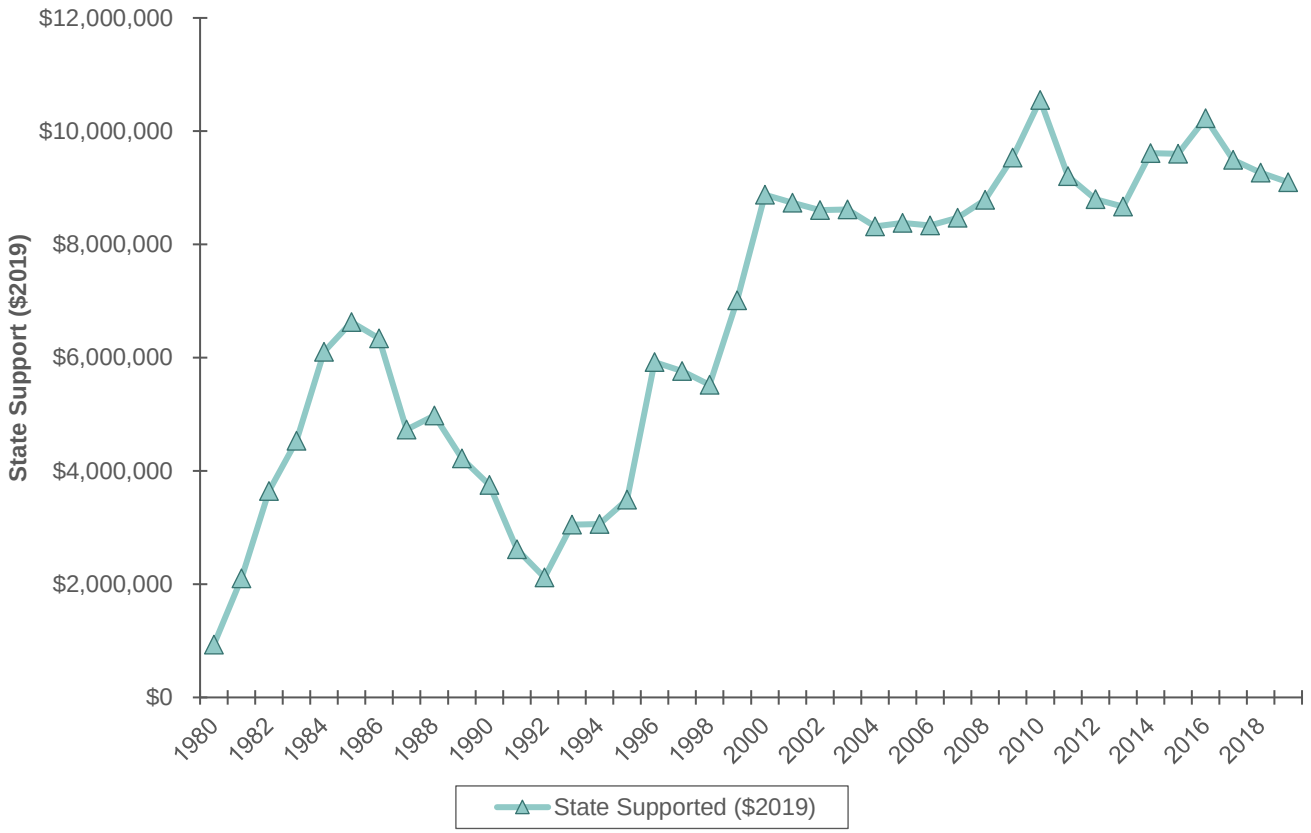
Source: MoDOT.

2019 was a particularly difficult year for *Missouri River Runner* ridership and OTP as prolonged springtime flooding along the Missouri River led to excessive congestion on the line due to the re-routing of freight trains, resulting in prolonged service cancellations over several weeks. In 2020, the COVID-19 pandemic brought intercity travel nationwide to a near standstill by late March. The *Missouri River Runner* was not spared, with a massive drop in ridership and a cutback in frequency from two to just one daily round trip.

Although MoDOT maintains and improves existing passenger rail service with relatively modest state and federal grants, there are no dedicated state funds and limited federal funds available for passenger rail operations and infrastructure improvements. The financial support Missouri has provided for the *Missouri River Runner* since 1980

allows this transportation option to exist. As shown in Figure 1.4, overall state support has increased over this period; however, total state support remains relatively stagnant since 2000.

FIGURE 1.4 TOTAL ANNUAL *MISSOURI RIVER RUNNER* STATE SUPPORT, 1980-2019



Source: MoDOT.

MoDOT's funding primarily comes from user fees, fuel taxes and federal funds dedicated to other transportation infrastructure needs. For example, fuel taxes are constitutionally protected and must be used for maintenance and investment in roadways. This challenging funding environment complicates MoDOT's efforts to continue supporting the *Missouri River Runner* given the full scope of the state's needs and priorities.

1.2 Key Data Sources

This economic impact assessment uses a variety of public and proprietary data sources, including:

- **Amtrak:** Public and proprietary data on *Missouri River Runner* ridership, origin-destination statistics, revenue, Amtrak employment, Amtrak expenditures and passenger survey data (including trip purpose and duration);
- **MoDOT:** Annual investment data from the State General Revenue Report (1980-2019) and *Missouri River Runner* ridership;

- **Missouri Division of Tourism:** Information on visitor expenditures, traveler profile and trip purpose is available via the Division's website;[3]
- ***Missouri River Runner* Station Directors:** Survey information about traveler profiles, key tourism destinations and planned investments; and
- **IMPLAN:** The economic impact model for the state of Missouri used to estimate total economic impacts.

This assessment also uses a number of web-based sources to develop various factors, detailed in Section 2.2.

1.3 Report Organization

The remainder of this report is organized as follows:

- **Section 2.0: Methodology –** Describes the approach, assumptions, passenger characteristics and *Missouri River Runner* station director surveys used for this assessment.
- **Section 3.0: Cost Savings & Spending Estimates –** Summarizes the calculated transportation costs savings, state of good repair cost savings, travel time cost savings, carbon dioxide emissions cost savings and fatalities cost savings as a result of *Missouri River Runner* ridership in Missouri. This section also discusses the estimated tourism and visitor spending totals associated with *Missouri River Runner* ridership as well as Amtrak statewide employment, payroll and vendor expenditures.
- **Section 4.0: Economic Impacts –** Summarizes the economic impacts on tourism and visitor spending and Amtrak employment, payroll and vendor expenditures using the IMPLAN economic impact model. The section describes impacts in terms of employment, labor income, Gross State Product or value added, output and tax revenue.

[3] Missouri Division of Tourism. "Research". Accessed 07/24/2020. https://industry.visitmo.com/research.

2.0 Methodology

This section describes the methodology for estimating the economic impact of the *Missouri River Runner* on Missouri. It provides detail on the overall approach, assumptions and factors used to estimate cost savings, spending and economic impacts, details pertaining to *Missouri River Runner* passenger characteristics and trip preferences and a summary of the information provided by the *Missouri River Runner* station directors survey.

2.1 Approach

The approach to estimating the economic impact of the *Missouri River Runner* on Missouri falls into three types of inputs:

- The **direct and indirect impacts of the *River Runner* service for residents of Missouri.** These impacts include transportation cost savings, travel time savings, emissions cost savings, safety and fatalities cost savings and state of good repair cost savings. Some of these impacts take the form of tax dollar savings, while others are part of day-to-day savings for Missouri residents.

- The **annual economic impact on the state of Missouri and local communities from travelers' spending using the *Missouri River Runner*.** Tourists, business travelers and other out-of-state visitors regularly use the *Missouri River Runner*. In addition to purchasing a *Missouri River Runner* train ticket, these travelers spend money at Missouri hotels, restaurants, entertainment venues, rental cars and other businesses. This spending has a tangible impact on the state economy.

- **The impact of direct Amtrak employment, payroll and vendor expenditures for the state of Missouri.** While the *Missouri River Runner* comprises a significant amount of track mileage and the majority of stations in the state, Amtrak's presence in Missouri goes beyond this single route. Amtrak has a significant impact on employment and business opportunities for Missouri residents and business establishments.

This three-pronged approach captures the direct, indirect and induced benefits of *Missouri River Runner* service in Missouri. The approach factors in the impacts of riders using alternative travel options (e.g., automobile, air, intercity bus) and riders that would opt out of the trip altogether if *Missouri River Runner* service was not available.

2.2 Assumptions

Estimating the economic impacts of the *Missouri River Runner* service requires assumptions about transportation spending, travel time, emissions, safety/fatalities and state of good repair. These assumptions provide the foundation to estimate a variety of economic impacts. This section details the sources and factors used to develop these assumptions.

Table 2.1 details the factors used to determine travelers' costs to ride the *Missouri River Runner* compared to other modes. It includes information about ticket purchases, fuel costs and private vehicle costs. Due to the minimal direct

connections available within Missouri along the *Missouri River Runner* corridor, examination of commercial air service was limited to flights between Kansas City International Airport and St. Louis-Lambert International Airport.

TABLE 2.1 FACTORS USED TO DETERMINE TRANSPORTATION SPENDING

Mode	Direct Cost	Approach	Value	Source
Train (Amtrak)	Train Ticket	Avg. passenger fare	$32.47	Amtrak FY18 Rt 56 ticket revenue divided by total annual ridership
	Fare per Mile	Avg. passenger fare per mile	$0.11	Average passenger fare divided by number of miles on the *Missouri River Runner*
Commercial Air	Airfare	Average Airfare (one way)	$88.00	Southwest Airlines one-way airfare between St. Louis and Kansas City
Automobile	Mileage	Round trip miles from station to station. Total cost per mile (assumed 15K miles per year)	$0.62	American Automobile Association. "Your Driving Costs. How much are you really paying to drive?" 2019. https://www.aaa.com/AAA/common/AAR/files/AAA-Your-Driving-Costs.pdf
Intercity Bus	Bus Ticket	Round trip miles from origin and/or destination city to nearest intercity bus station.	$45.00	Current median bus fare between Kansas City and St. Louis
Rental Car	Rental Fee per day	Average mid-week rental fee	$48.17	Priced Oct 19-22, 2020 via Kayak.com for STL and KCI, same dates
	Fuel	Gasoline – all grades, cost per gallon	$2.54	Annual Retail Gasoline Prices for Midwest (PADD 2) – average vehicle mile per gallon. U.S. Energy Information Administration. https://www.eia.gov/dnav/pet/pet_pri_gnd_dcus_r20_a.htm

Table 2.2 lists the factors used to estimate the amount of time it takes to travel between station destinations via the *Missouri River Runner* compared to other transportation modes. This analysis derives the *Missouri River Runner* and intercity bus estimates from published schedules, estimates travel times for private automobiles using Google Maps[4] trip planner and uses existing non-stop service between St. Louis and Kansas City for commercial air travel times.

TABLE 2.2 FACTORS USED TO DETERMINE TRAVEL TIME IMPACTS

Mode	Travel Time	Approach	Value	Time and Source
Train (Amtrak)	Kansas City to St. Louis	Travel time based on train speed and route mileage	50 mph	5 hour 40 minute running time between Kansas City and St Louis based on March 2020 schedule, 283 miles
Commercial Air	Kansas City to St. Louis	Travel time-based on-air carrier schedules and includes the time associated with security clearance, etc.	3 hours	1-hour flight time on Southwest Airlines plus 2 hours for security, check-in and boarding

[4] Note that Google Maps trip planner illustrates a typical travel time in mostly free-flow conditions. Any additional delays due to crashes, peak hour travel, etc. will case the travel time for alternative modes to increase. Therefore, the values represented by these assumptions are average estimates.

Intercity Bus	Kansas City to St. Louis	Travel time based on bus schedules	58 mph	4 hour 20 minute running time between Kansas City and St. Louis, October 2020 schedule, 248 miles. Most other *Missouri River Runner* locations not directly served by intercity bus.
Rental Car, Personal Auto	Station to Station	Round trip travel time from origin and/or destination city	58-64 mph	Varies based on origin-destination pair, but Kansas City to St. Louis travel time would range from 3 hours 50 minutes to 4 hours 20 minutes per Google Maps

Table 2.3 provides assumptions to estimate the value of time for each mode depending on the purpose of the trip when combined with travel time estimates shown in Table 2.2. These are based on U.S. DOT guidance for benefit-cost analyses conducted for federal discretionary grant programs. The guidance categorizes trip purpose into three types: personal, business and all other, with the value of time being the same across all modes for each trip purpose.

TABLE 2.3 FACTORS USED TO DETERMINE VALUE OF TIME

Mode	Trip Purpose	Approach	Value	Source
All modes	Personal	2018 USD per hour travel time savings	$15.20	U.S. DOT Benefit-Cost Analysis Guidance for Discretionary Grant Programs, January 2020.
	Business	2018 USD per hour travel time savings	$27.10	U.S. DOT Benefit-Cost Analysis Guidance for Discretionary Grant Programs, January 2020.
	All purposes	2018 USD per hour travel time savings	$16.60	U.S. DOT Benefit-Cost Analysis Guidance for Discretionary Grant Programs, January 2020.

Table 2.4 presents factors specifying carbon dioxide emissions rates for each mode and associated fuel source, drawn principally from the U.S. Energy Information Administration. Diesel fuel has the highest level of kilograms of CO_2 per unit, though all fuels are in the 70.9 to 73.2 range. The U.S. DOT provides estimates of the social cost of carbon, which quantifies the cost of economic harm to society resulting from environmental damages for each metric ton emitted. The report uses this value to estimate the total cost of emissions resulting from Amtrak compared to alternative travel modes.[5]

TABLE 2.4 FACTORS USED TO DETERMINE CARBON DIOXIDE EMISSIONS

Mode	Emissions	Approach	Value	Source
Train (Amtrak)	Value per Btu	Btu per passenger mile, national avg	1,524	Transportation Energy Data Book. Edition 38. 2020. Table 2.13 - Passenger Travel and Energy Use. https://tedb.ornl.gov/wp-content/uploads/2020/02/TEDB_Ed_38_04302020.pdf

[5] Most climate change experts view that current federal guidance does not properly reflect actual societal impacts from carbon emissions. For a discussion of this issue, see **Social Cost of Carbon: Identifying a Federal Entity to Address the National Academies' Recommendations Could Strengthen Regulatory Analysis,** US GAO, 2020.

Mode	Emissions	Approach	Value	Source
	Kg. CO_2 per MMBtu	Kg. CO_2 per MMBtu - Diesel	73.2	U.S. EIA. 02/02/16 Carbon Dioxide Emissions Coefficients. http://www.eia.gov/environment/emissions/co2_vol_mass.cfm
	Kg. CO_2 per passenger mile	Kg. CO_2 per passenger mile	0.1	U.S. EIA. 02/02/16 Carbon Dioxide Emissions Coefficients. http://www.eia.gov/environment/emissions/co2_vol_mass.cfm
Commercial Air	Value per Btu	Btu per passenger mile, national avg	2,391	U.S. EIA. 02/02/16 Carbon Dioxide Emissions Coefficients. http://www.eia.gov/environment/emissions/co2_vol_mass.cfm
	Kg. CO_2 per MMBtu	Kg. CO_2 per MMBtu – Jet Fuel	70.9	U.S. EIA. 02/02/16 Carbon Dioxide Emissions Coefficients. http://www.eia.gov/environment/emissions/co2_vol_mass.cfm
	Kg. CO_2 per passenger mile	Kg. CO_2 per passenger mile	0.2	U.S. EIA. 02/02/16 Carbon Dioxide Emissions Coefficients. http://www.eia.gov/environment/emissions/co2_vol_mass.cfm
Automobile	Value per Btu	Btu per passenger mile, national avg	2,888	U.S. EIA. 02/02/16 Carbon Dioxide Emissions Coefficients. http://www.eia.gov/environment/emissions/co2_vol_mass.cfm
	Kg. CO_2 per MMBtu	Kg. CO_2 per MMBtu - Gasoline	71.3	U.S. EIA. 02/02/16 Carbon Dioxide Emissions Coefficients. http://www.eia.gov/environment/emissions/co2_vol_mass.cfm
	Kg. CO_2 per passenger mile	Kg. CO_2 per passenger mile	0.2	U.S. EIA. 02/02/16 Carbon Dioxide Emissions Coefficients. http://www.eia.gov/environment/emissions/co2_vol_mass.cfm
Intercity Bus	Value per Btu	Btu per passenger mile, national avg	823	U.S. DOT - Table 4-20: Energy Intensity of Passenger Modes https://www.bts.gov/archive/publications/national_transportation_statistics/table_04_20
	Kg. CO_2 per MMBtu	Kg. CO_2 per MMBtu - Diesel	73.2	U.S. EIA. 02/02/16 Carbon Dioxide Emissions Coefficients. http://www.eia.gov/environment/emissions/co2_vol_mass.cfm
	Kg. CO_2 per passenger mile	Kg. CO_2 per passenger mile	0.1	U.S. EIA. 02/02/16 Carbon Dioxide Emissions Coefficients. http://www.eia.gov/environment/emissions/co2_vol_mass.cfm
Social Cost of Carbon	Social cost of carbon (all modes)	Per metric ton of CO_2	$1.00	U.S. DOT Benefit-Cost Analysis Guidance for Discretionary Grant Programs, January 2020.

Table 2.5 details the factors used to determine fatality rates for *Missouri River Runner* ridership compared to alternative travel modes. This report sources the national average fatality rates for Amtrak, commercial air and intercity bus modes from the Bureau of Transportation Statistics and the American Association of State Highway Transportation Officials. The Missouri State Highway Patrol provides state fatality rates for automobiles. The fatality rate for automobiles (1.20 fatalities per 100 million passenger miles) is significantly higher than that of other modes. Intercity bus has the second-highest fatality rate (0.28 fatalities per 100 million passenger miles). The U.S. DOT publishes guidance on the economic value of a statistical life, which estimates the monetary benefit of preventing an injury or fatality, defined as the additional cost that individuals would be willing to bear for improvements in safety that, in the aggregate, reduce the expected number of fatalities by one.[6]

[6] U.S. Department of Transportation, "Revised Departmental Guidance on Valuation of a Statistical Life in Economic Analysis". 08/22/2016. https://www.transportation.gov/office-policy/transportation-policy/revised-departmental-guidance-on-valuation-of-a-statistical-life-in-economic-analysis

TABLE 2.5 FACTORS USED TO DETERMINE FATALITY RATE

Mode	Approach	Value	Source
Train (Amtrak)	Per 100M passenger miles, national avg.	0.04	AASHTO - High-Speed and Intercity Passenger Rail, http://www.highspeed-rail.org/Pages/BasicFacts.aspx
Commercial Air	Per 100M passenger miles, national avg.	0.00	U.S. DOT - Table 2-9: US Air Carrier Safety Data, https://www.bts.gov/archive/publications/national_transportation_statistics/table_02_09
Auto - Missouri	Per 100M passenger miles, Missouri	1.20	Missouri State Highway Patrol, https://www.mshp.dps.missouri.gov/MSHPWeb/SAC/crash_data_rates_960grid.html
Intercity Bus	Per 100M passenger miles, national avg.	0.28	U.S. DOT - Table 2-18: Motor Vehicle Fatalities, Vehicle-Miles, and Associated Rates by Highway Functional System, https://www.bts.gov/archive/publications/national_transportation_statistics/table_02_24
Economic Value of Statistical Life (all modes)	Per Fatality	$9,600,000	U.S. DOT, Guidance on Treatment of the Economic Value of a Statistical Life, https://www.transportation.gov/sites/dot.gov/files/docs/2016%20Revised%20Value%20of%20a%20Statistical%20Life%20Guidance.pdf

Table 2.6 presents the factors used to estimate the state of good repair costs for the *Missouri River Runner* compared to alternative travel modes. These cost evaluations are based on occupancy, vehicle weight and the estimated monetary impact per ton mile as published by the Congressional Budget Office. The values approximate the amount of tax dollars required to support ridership on the *Missouri River Runner* as well as diversions to alternative modes.

TABLE 2.6 FACTORS USED TO DETERMINE STATE OF GOOD REPAIR

Mode	Factor	Approach	Value	Source
Train (Amtrak)	State of Good Repair Impact	Cents per ton mile	$0.0005	https://www.cbo.gov/sites/default/files/114th-congress-2015-2016/workingpaper/50049-Freight_Transport_Working_Paper-2.pdf
	Weight of Train	Tons	345	Based on the weight of a Siemens SC-44 and four Amfleet cars (Horizon fleet weight is similar) https://en.wikipedia.org/wiki/Siemens_Charger https://en.wikipedia.org/wiki/Amfleet
Automobile	Occupancy	Persons per vehicle	1.67	U.S. DOT Benefit-Cost Analysis Guidance for Discretionary Grant Programs, January 2020.
	State of Good Repair Impact	Cents per ton-mile	$0.80	https://www.cbo.gov/sites/default/files/114th-congress-2015-2016/workingpaper/50049-Freight_Transport_Working_Paper-2.pdf
	Automobile Weight	Tons	2	Cambridge Systematics.
Intercity Bus	State of Good Repair Impact	Cents per ton-mile	$0.80	https://www.cbo.gov/sites/default/files/114th-congress-2015-2016/workingpaper/50049-Freight_Transport_Working_Paper-2.pdf
	Bus Weight	Tons	20	http://onlinepubs.trb.org/onlinepubs/tcrp/docs/TCRPJ-11Task20-FR.pdf

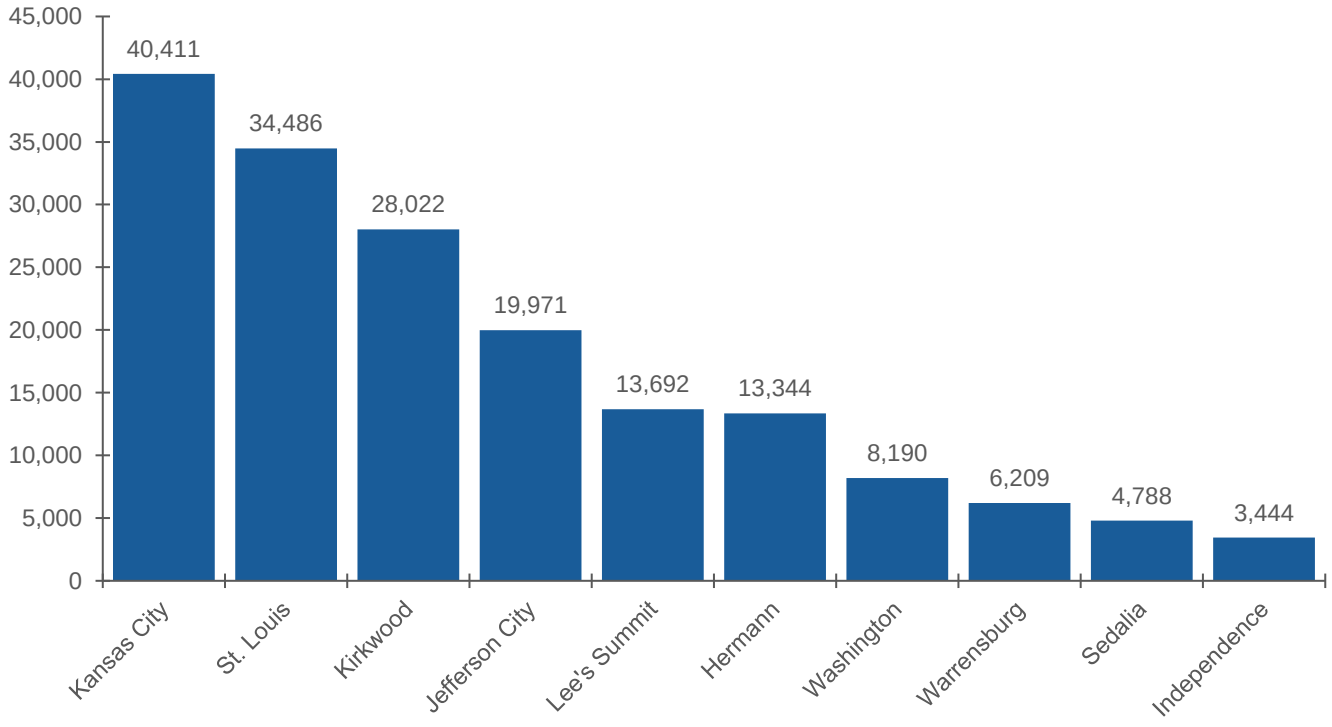
2.3 Passenger Characteristics

Understanding the characteristics of riders is fundamental to assessing the economic impacts of the *Missouri River Runner*. This includes understanding why people choose to ride the *Missouri River Runner*, where they are going, and how and whether they would make the trip if the *Missouri River Runner* is unavailable. This section discusses the findings and assumptions pertaining to ridership by station, trip purpose, selection of alternative modes and tourism and visitor spending factors.

Ridership

As noted in Section 1.1 *Missouri River Runner* ridership experienced significant declines in the years following 2018 as a result of specific events. In 2019, spring flooding of the Missouri River resulted in schedule cancelations for a number of weeks, followed by poor on-time performance. The COVID-19 pandemic of 2020 resulted in a massive drop in ridership in late March and a cutback in frequency from two to one daily round trips. Thus, this evaluation uses 2018 ridership as the base year for the economic impact analysis. Figure 2.1 shows that in 2018, 172,555 travelers rode the *Missouri River Runner.* [7] The Kansas City station had the highest number of riders with over 40,400, followed by the St. Louis, Kirkwood and Jefferson City stations.

FIGURE 2.1 ANNUAL *MISSOURI RIVER RUNNER* RIDERSHIP BY STATION, 2018

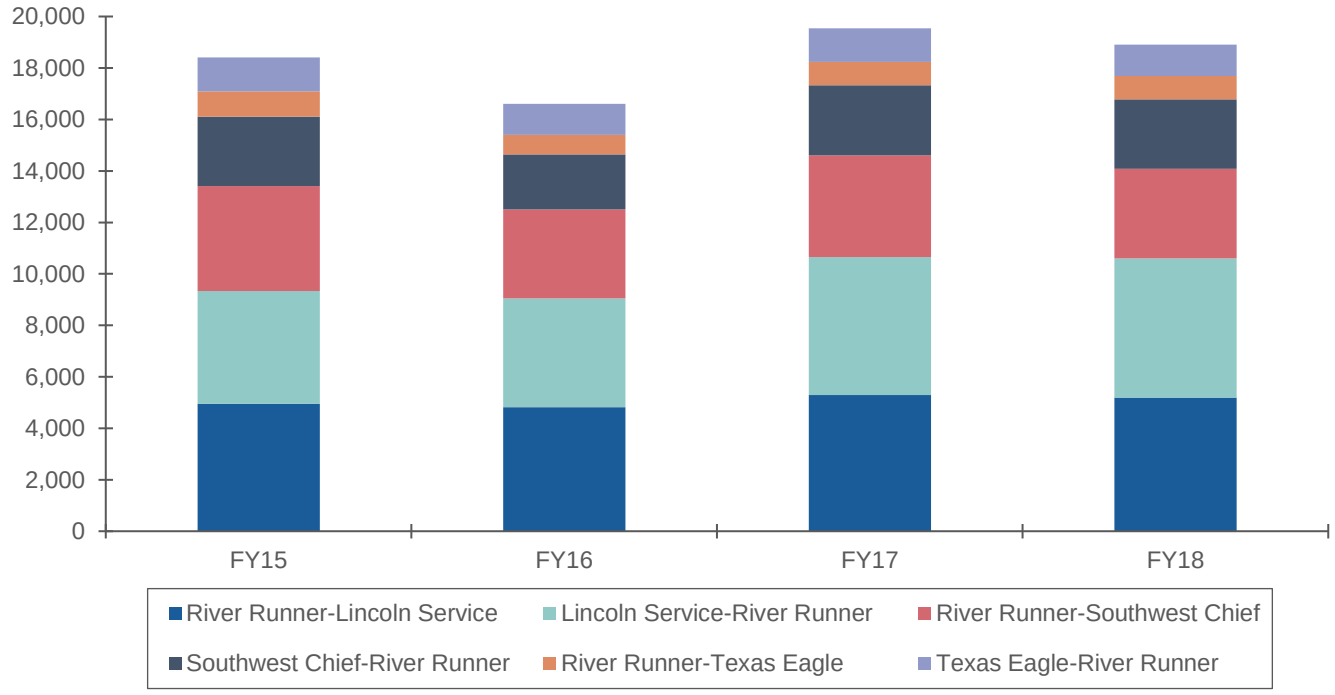


Source(s): Amtrak; MoDOT.

[7] Note that this data reflects the average of boardings and alightings at each station. Nearly all stations have a relatively equal split between boardings and alightings except for Warrensburg with 55% of passengers boarding and 45% alighting.

Connecting services to the *Missouri River Runner* include the *Lincoln Service, Southwest Chief* and *Texas Eagle.* As shown in Figure 2.2 this amounts to approximately 19,000 riders per year. In 2017, the peak year, 19,540 passengers made connections between trains. This connecting ridership consistently accounts for 10-11% of total ridership each year. Without the *Missouri River Runner* service, many riders may reconsider either taking their trip or continuing to use Amtrak on the other available lines.

FIGURE 2.2 AMTRAK RIDERS CONNECTING TO THE *MISSOURI RIVER RUNNER*, 2015-2018



Source(s): Amtrak.

Trip Purpose

To estimate the travel patterns of riders if the *Missouri River Runner* service is unavailable, it is critical to understand why riders choose the *Missouri River Runner* in the first place. To help understand this question, Amtrak provided the results from eight questions of a passenger survey which was administered to 400 passengers on a *Missouri River Runner* train from Kansas City to St. Louis. One question asked participants to choose the main purpose of their trip from eight options. Since Kansas City and St. Louis comprise the majority of station activity along the *Missouri River Runner*, responses to this question were strongly associated with riders boarding and alighting at these stations. Survey responses submitted by station directors for seven stations, which are provided in Appendix A, informed the trip purpose of each of the remaining stations. Based on analysis of these results, the estimated trip purpose by *Missouri River Runner* station is shown in Table 2.7.

TABLE 2.7 TRIP PURPOSE BY STATION

	Trip Purpose							
Destination Station	Daily commute to/from work	Business travel	Travel to/from school	Visit family or friends	Vacation (>1 week)	Leisure or recreation (e.g., dining, long weekend)	Personal or family (e.g., wedding)	Shopping
Kansas City	1%	10%	5%	56%	8%	13%	6%	1%
Independence	1%	1%	1%	20%	11%	35%	30%	1%
Lee's Summit	1%	20%	1%	40%	6%	30%	1%	1%
Warrensburg	1%	5%	45%	40%	1%	5%	2%	1%
Sedalia	1%	5%	5%	25%	15%	40%	8%	1%
Jefferson City	1%	10%	5%	56%	8%	13%	6%	1%
Hermann	1%	15%	1%	20%	15%	30%	17%	1%
Washington	1%	1%	20%	30%	5%	22%	20%	1%
Kirkwood	1%	10%	5%	40%	8%	15%	6%	15%
St. Louis	1%	10%	5%	56%	8%	13%	6%	1%

Source(s): Amtrak Missouri River Runner Passenger Survey; CS Survey of Missouri River Runner Station Directors; Cambridge Systematics.

Alternate Mode Choice

To determine which alternative travel modes riders would choose in the absence of *Missouri River Runner* service, previously published Amtrak rider survey findings were utilized to develop an alternative mode selection by station:

- Amtrak's Economic Contribution (December 2014)[8] reported that 27% would fly, 11% would ride the bus, 53% would drive and 8% would not take the trip at all if *Missouri River Runner* service was not available; and
- Amtrak's Contributions to Missouri (2015 and 2016)[9,10] reported that 19% would fly, 7% would ride the bus, 64% would drive and 10% would not take the trip at all if *Missouri River Runner* service was not available.

Due to the limited information available about the survey respondents' geographic location and station usage, a more varied approach by station was developed using these survey findings as a base. The team supplemented the approach with information gleaned from station director surveys about traveler profiles and visitor habits. Figure 2.3 features these estimates. These estimates also factor in travel mode availability at each station location;

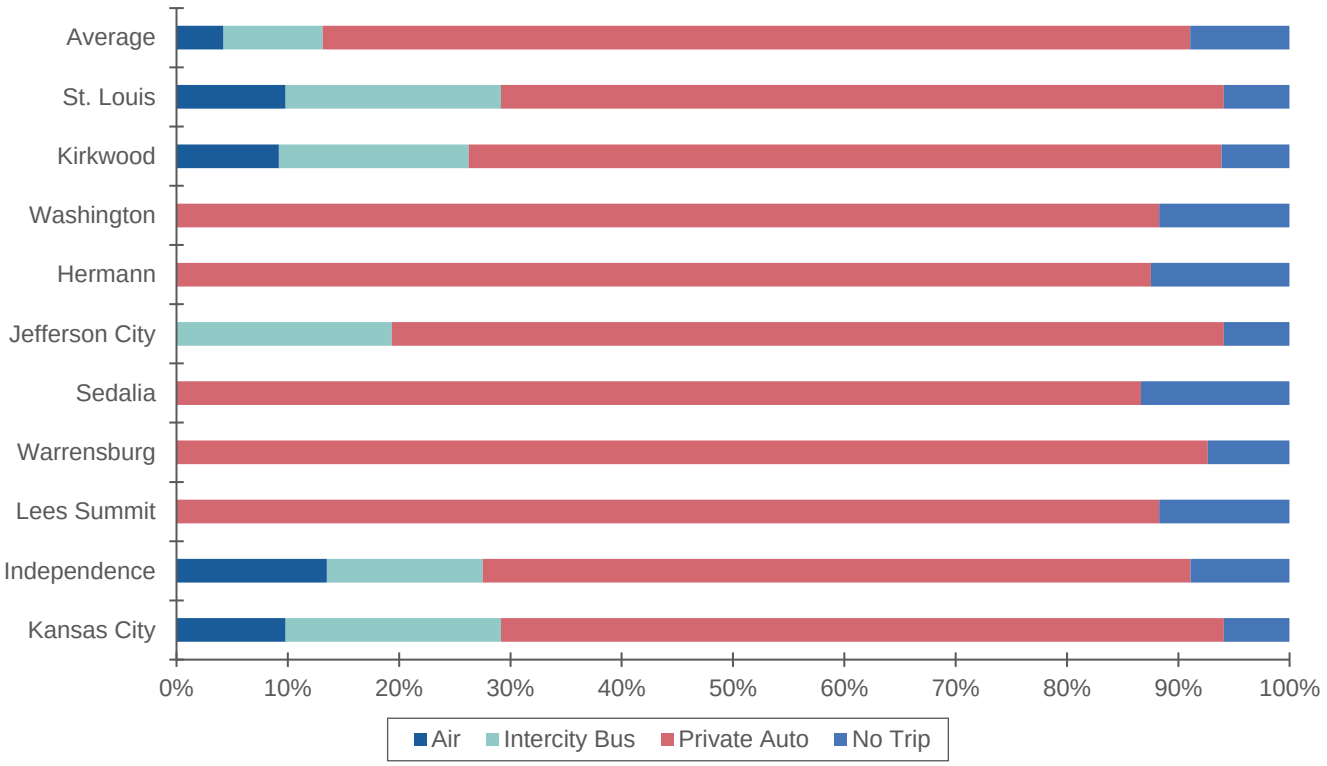
[8] https://www.amtrak.com/content/dam/projects/dotcom/english/public/documents/corporate/nationalfactsheets/Amtrak-Economic-Contribution-Brochure-083016.pdf

[9] FY 2015 brochure available here: https://www.amtrak.com/content/dam/projects/dotcom/english/public/documents/corporate/stateeconomicimpactbrochures/Missouri15.pdf

[10] FY 2016 brochure available here: https://www.amtrak.com/content/dam/projects/dotcom/english/public/documents/corporate/stateeconomicimpactbrochures/Missouri-fy16.pdf

for example, intercity bus service is not proximate to the Lee's Summit, Warrensburg, Sedalia, Hermann or Washington stations. Similarly, there are only two commercial airports near *Missouri River Runner* stations (St. Louis Lambert International and Kansas City International) that provide direct air service within Missouri. Although the analysis incorporated the proportions of alternative mode selection by station, on average, 4% of riders would choose air modes, 9% would choose intercity bus, 78% would drive via automobile and 9% would not take the trip at all if *Missouri River Runner* service was not available. Most of this 9% no longer taking their trip are likely riders of connecting Amtrak services who would find alternative travel destinations.

FIGURE 2.3 PROPORTION OF RIDERS SELECTING ALTERNATIVE MODES BY *MISSOURI RIVER RUNNER* STATION



Source(s): CS Survey of Missouri River Runner Station Directors; Cambridge Systematics; Amtrak.

Using the 2018 ridership numbers as a base, Table 2.8 presents the results of applying the factors developed in Figure 2.3 for automobile, bus, air and "no trip" modes. Ridership numbers were used to estimate the cost savings and spending estimates detailed in Section 3.0. The formula used to determine this is as follows:

*Ridership per mode = Annual Ridership at Station * Percent of Alternative Mode Share*

An example of this would be the 65% of ridership at Kansas City switching to automobile:

*26,247 automobile users = 40,411 riders * 65% automobile mode share*

TABLE 2.8 ANNUAL RIDERSHIP BY MODE, 2018

Station	*Missouri River Runner*	Automobile	Bus	Air	No Trip
Kansas City	40,411	26,247	7,820	3,960	2,384
Independence	3,444	2,191	482	465	307
Lee's Summit	13,692	12,090	0	0	1,602
Warrensburg	6,209	5,752	0	0	456
Sedalia	4,788	4,148	0	0	639
Jefferson City	19,971	14,928	3,864	0	1,178
Hermann	13,344	11,682	0	0	1,661
Washington	8,190	7,232	0	0	958
Kirkwood	28,022	18,957	4,778	2,578	1,709
St. Louis	34,486	22,399	6,673	3,380	2,035
Total	**172,555**	**125,625**	**23,617**	**10,383**	**12,930**

Source: CS Survey of Missouri River Runner Station Directors; Cambridge Systematics, Amtrak.

Another element of calculating alternative mode choice metrics is estimating the distance between each combination of stations along the *Missouri River Runner*. Google Maps was used to determine the shortest trip between each station pairing. Table 2.9 shows these mileages along with that station's average distance to all other stations based on origin-destination pairs.

TABLE 2.9 AVERAGE MILEAGE BETWEEN EACH *MISSOURI RIVER RUNNER* STATION PAIRING

Station	Kansas City	Independence	Lee's Summit	Warrensburg	Sedalia	Jefferson City	Hermann	Washington	Kirkwood	St. Louis	Avg. Mileage from each Station
Kansas City	–	11	24	62	95	159	190	217	242	250	**214**
Independence	11	–	16	56	86	150	181	208	232	240	**187**
Lee's Summit	24	16	–	39	67	128	185	212	237	245	**193**
Warrensburg	62	56	39	–	30	91	137	185	209	217	**142**
Sedalia	95	86	67	30	–	61	108	136	182	190	**124**
Jefferson City	159	150	128	91	61	–	49	78	113	125	**123**
Hermann	190	181	185	137	108	49	–	28	66	78	**113**
Washington	217	208	212	185	136	78	28	–	39	51	**116**
Kirkwood	242	232	237	209	182	113	66	39	–	14	**172**
St. Louis	250	240	245	217	190	125	78	51	14	–	**204**

Source: Google Maps based on shortest trip.

The average distance between *Missouri River Runner* stations, along with ridership numbers and alternative travel modes, was used to develop estimates for vehicle miles traveled for each mode. This is part of the calculation of travel time cost savings, fatalities cost savings and state of good repair cost savings.

Mileage for train, air and intercity bus was calculated based on the distance each mode travels on their daily one-way trips (four trains, two buses and two airplanes) multiplied by 365 to represent service each day of the year. This mileage is not calculated at a station level as it will not vary with ridership, only with an increase or decrease in service. This follows the formula of:

*Modal VMT = Daily Number of Trips * Distance * 365 days/year*

For the four daily *Missouri River Runner* trips, this equates to:

*413,180 VMT from Missouri River Runner Service = 4 daily trips * 283 miles * 365 days/year*

For travel by personal automobile, VMT was calculated by multiplying the average mileage to each station by the estimated ridership (Table 2.8), divided by average occupancy (Table 2.6). Table 2.10 shows the values for VMT by mode and station (automobile only). VMT for automobiles can be shown at a station level as changes in ridership will impact the number of vehicles on the road. The VMT for automobiles is calculated based on the following formula:

*Automobile VMT = Average Mileage from Each Station * Ridership per Mode/Vehicle Occupancy*

Therefore, the 26,247 riders attributed to the Kansas City station (Table 2.8) who would switch to an automobile and travel an average of 214 miles on the *Missouri River Runner* (Table 2.9) account for the following automobile VMT:

*3,370,443 VMT = 214 miles * 26,247 riders/1.67 persons per vehicle*[11]

TABLE 2.10 ANNUAL VEHICLE MILES TRAVELED BY MODE, 2018

Station	Avg. Mileage from each Station	Total VMT			
		Missouri River Runner	Automobile	Intercity Bus	Air
Kansas City	214		3,370,443		
Independence	187		245,218		
Lee's Summit	193		1,399,456		
Warrensburg	142		490,604		
Sedalia	122		307,109		
Jefferson City	123		1,100,550		
Hermann	113		791,889		
Washington	116		501,742		
Kirkwood	172		1,958,009		
St. Louis	204		2,730,401		
Total		**413,180**	**12,895,422**	**206,590**	**206,590**

Source: CS Survey of Missouri River Runner Station Directors; Cambridge Systematics.

[11] Due to rounding, numbers presented in calculations throughout this Section may not add up precisely to the totals provided. For example, in this calculation the number of estimated riders was rounded to the nearest whole number for the purpose of simplifying the explanation.

Tourism & Visitor Spending

Assumptions were developed pertaining to tourism and visitor spending for *Missouri River Runner* riders based on whether the station is in an urban or rural part of the state. Stations were categorized as follows:

- Urban[12]: Includes Kansas City, Independence, Lee's Summit, Jefferson City, Kirkwood and St. Louis stations; and
- Rural[13]: Includes Warrensburg, Sedalia, Hermann and Washington stations.

Other factors were also developed to estimate the average trip length, hotel expenditures and food and sightseeing expenditures for riders at urban and rural stations by trip purpose, as shown in Table 2.11. Note that the average trip length reflects the value of a one-way trip for purposes of calculating spending estimates (i.e., the average length of a business travel trip is estimated at two days, but the value associated with a one-way trip on *Missouri River Runner* is one day).

TABLE 2.11 FACTORS USED TO DETERMINE TOURISM & VISITOR SPENDING

	Trip Purpose							
Factor	Daily commute to/from work	Business travel	Travel to/from school	Visit family or friends	Vacation (>1 week)	Leisure or recreation (e.g., dining, long weekend)	Personal or family (e.g., wedding)	Shopping
Avg. Trip Length (Days)	*0.5*	*1*	*0.5*	*2*	*3.5*	*0.75*	*0.75*	*0.5*
Hotel Expenditures (per day)								
Urban	$0	$109	$0	$71	$109	$109	$109	$0
Rural	$0	$89	$0	$79	$89	$89	$89	$0
Hotel Expenditures (total)								
Urban	$0	$109	$0	$142	$382	$82	$82	$0
Rural	$0	$89	$0	$158	$312	$67	$67	$0
Food/Sightseeing Expenditures (per day)								
Urban	$0	$86	$0	$86	$86	$188	$86	$188
Rural	$0	$96	$0	$96	$96	$170	$96	$170
Food/Sightseeing Expenditures (total)								
Urban	$0	$86	$0	$172	$301	$141	$65	$94
Rural	$0	$96	$0	$192	$336	$128	$72	$85

Source(s): Amtrak Missouri River Runner Passenger Survey; CS Survey of Missouri River Runner Station Directors; Cambridge Systematics.

[12] Estimates for tourism spending for urban stations was sourced from: https://championtraveler.com/price/cost-of-a-trip-to-saint-louis-mo-us/.

[13] Estimates for tourism spending for rural stations was sourced from: https://championtraveler.com/price/cost-of-a-trip-to-washington-mo-us/.

2.4 Missouri Station Director Surveys

Between May and July 2020, the project team distributed surveys to each *Missouri River Runner* station director to gather additional information about *Missouri River Runner* riders, tourism attractions, capital improvements and challenges and opportunities at each station. Of the 10 *Missouri River Runner* stations, seven station directors responded to the survey: Sedalia, Hermann, Independence, Kirkwood, Lee's Summit, Warrensburg and Washington. The station directors that did not respond include Kansas City, St. Louis and Jefferson City.

The survey responses submitted by each of the seven station directors are provided in Appendix A.

3.0 Cost Savings & Spending Estimates

This section details the cost savings and spending estimates developed for seven categories of impacts. At a high level, the analysis determined that the *Missouri River Runner* supports:

- $47.1 million in annual hotel, food and sightseeing spending tied to *Missouri River Runner* ridership;
- $28.9 million in annual Amtrak vendor spending, $7.5 million in Amtrak payroll and 78 Amtrak jobs for Missouri residents and businesses;
- $6.5 million in annual transportation cost savings for Missouri residents and visitors;
- $2.6 million in additional annual travel time expenditures for riders of the *Missouri River Runner*;
- $1.4 million in annual savings associated with a reduced fatality rate;
- $0.16 million in annual state of good repair savings for the state of Missouri; and
- $1,757 in avoided annual carbon dioxide emissions impacts.

3.1 Transportation Cost Savings

Total transportation cost savings were calculated by subtracting the estimated transportation costs associated with the *Missouri River Runner* from the transportation costs associated with the three alternative modes (automobile, intercity bus and air). Table 3.1 shows the estimated costs for each mode.

Transportation costs associated with the three alternative travel modes were calculated differently depending on the mode. Commercial air transportation and intercity bus costs include the fare between Kansas City and St. Louis and automobile costs included driving costs from station to station (assumptions shown in Table 2.1). The team determined ridership for each mode based on the proportion of annual ridership selecting each alternative mode, as discussed in Section 2.3 and shown in Table 2.8. The estimated annual total transportation costs for alternative modes is $10.0 million. The formula for air and intercity bus is as follows:

*Air or Intercity Bus Transportation Spending = Fare * Mode Ridership*

In the case of an $88 flight from St. Louis to Kansas City for the 3,380 passengers switching to air travel without *Missouri River Runner* service (Table 2.8), the following calculation is made:

*$297,407 in Air Transportation Spending = $88 airfare * 3,380 passengers*[14]

[14] Due to rounding, numbers presented in calculations throughout this Section may not add up precisely to the totals provided. For example, in this calculation the number of estimated passengers was rounded to the nearest whole number for the purpose of simplifying the explanation.

The formula for automobile costs is based on the following formula:

*Automobile Transportation Spending = VMT * Cost of Driving per Mile*

In the case of the 3,370,443 VMT attributed to riders at the Kansas City Station (calculated in Table 2.10), the transportation spending is as follows:

*$2,085,630 in Automobile Transportation Spending = 3,370,443 VMT * $0.62 cost per mile*

The transportation costs associated with the *Missouri River Runner* were calculated based on each station's average mileage to other *Missouri River Runner* stations using an average ticket cost per mile ($0.11 per mile) and station ridership. The estimated annual total transportation costs for the *Missouri River Runner* is $3.5 million. The formula for this is as follows:

*Amtrak Transportation Costs = Average Mileage from Each Station * Average Ticket Cost per Mile * Station Ridership*

In the case of the 40,411 riders departing from Kansas City (Table 2.8) traveling an average of 214 miles each (Table 2.9), this calculation is as follows:

*$994,452 in Amtrak Spending = 214 miles * $0.11 Average Ticket Cost per Mile * 40,411 riders*

Estimated transportation cost savings to Missouri from *Missouri River Runner* ridership is calculated by subtracting the amount spent on *Missouri River Runner* tickets minus the cost of alternative mode of transportation. This is estimated to be $6.5 million annually.

TABLE 3.1 ANNUAL ESTIMATED TRANSPORTATION SPENDING FOR ALTERNATIVE MODES VS. AMTRAK, 2018, (MILLIONS)

Station	Air	Bus	Auto	Alternative Modes Total	Amtrak	Difference in Transportation Cost
Kansas City	$0.35	$0.35	$2.09	$2.79	$0.99	$1.80
Independence	$0.04	$0.02	$0.15	$0.21	$0.07	$0.14
Lee's Summit	$0	$0	$0.87	$0.87	$0.30	$0.57
Warrensburg	$0	$0	$0.30	$0.30	$0.10	$0.20
Sedalia	$0	$0	$0.19	$0.19	$0.07	$0.12
Jefferson City	$0	$0.17	$0.68	$0.85	$0.28	$0.57
Hermann	$0	$0	$0.49	$0.49	$0.17	$0.32
Washington	$0	$0	$0.31	$0.31	$0.11	$0.20
Kirkwood	$0.23	$0.21	$1.21	$1.65	$0.55	$1.10
St. Louis	$0.30	$0.30	$1.69	$2.29	$0.81	$1.48
Total	**$0.92**	**$1.05**	**$7.98**	**$9.95**	**$3.45**	**$6.50**

3.2 State of Good Repair Cost Savings

The total state of good repair cost savings are calculated by subtracting the estimated SOGR costs associated with the *Missouri River Runner* from the SOGR costs associated with the three alternative modes.

SOGR costs were calculated based on each station's average mileage to other *Missouri River Runner* stations, ridership by mode (see Table 2.8) and VMT by mode (see Table 2.10) as well as assumptions pertaining to mode-specific occupancy, average vehicle weights and estimated SOGR impacts (see Table 2.6). The formula for this is as follows:

*State of Good Repair Impacts = VMT * Mode Impact per Ton-Mile * Tonnage*

For the 413,180 annual miles the *Missouri River Runner* travels (Table 2.10), the calculation is as follows:

*$0.08 Million State of Good Repair Impacts = 413,180 * (0.05 cents per ton-mile /100) * 345 tons*

The estimated annual SOGR costs associated with Amtrak total approximately $0.08 million, as shown in Table 3.2.[15] The estimated annual SOGR costs associated with all alternative modes total approximately $0.24 million. The SOGR cost savings to Missouri due to *Missouri River Runner* ridership is estimated at $0.16 million annually.

TABLE 3.2 ANNUAL ESTIMATED STATE OF GOOD REPAIR SPENDING FOR *MISSOURI RIVER RUNNER*, 2018 (MILLIONS)*

Station	*Missouri River Runner*	Automobile	Bus	Alternative Modes Total	Difference in SOGR Spending
Total	**$0.08**	**$0.21**	**$0.03**	**$0.24**	**$0.16**

** State of good repair spending for air is not included in the table as it represents less than $10,000.*

3.3 Travel Time Cost Savings

Total travel time cost savings were calculated by subtracting the estimated travel time costs associated with the *Missouri River Runner* from the travel time costs associated with the three alternative modes.

Travel time for each mode was calculated by multiplying each station's average mileage from other *Missouri River Runner* stations by ridership (see Table 2.8) then dividing by the average estimated travel time value by mode (see Table 2.2). The team calculated the value of time, which determines the travel time cost savings by mode, by

[15] Note that Union Pacific, owner of the rail assets used by the *Missouri River Runner*, is compensated by Missouri through their operating contract for state of good repair expenses.

multiplying the total travel time by the estimated hourly value per hour of time per trip (see Table 2.3). In a formula format, this is as follows:

*Value of Travel Time by Mode = Average Mileage from Each Station * Station Ridership * Value of Time/Average Travel Speed*

For the 40,411 passengers departing from Kansas City on Amtrak (Table 2.8) traveling an average of 214 miles (Table 2.9) traveling at 50 mph (Table 2.2), this results in the following:

*$2,880,538 Missouri River Runner Value of Time = 214 miles * 40,411 passengers * $16.60 per hour /50 mph*

The travel time costs associated with Amtrak ridership total $10 million annually, and the travel time costs associated with alternative modes total $7.4 million annually.

Estimated additional travel time costs resulting from *Missouri River Runner* ridership is $2.6 million annually. This is the only metric that resulted in additional costs for riders, due to the additional travel time associated with selecting the *Missouri River Runner* compared to other modes that can travel at higher speeds (e.g., automobiles on the highway network). This is a conservative estimate as passenger vehicle travel times assume relatively free-flow speeds. Any increases in travel time due to congestion, crashes or the like would reduce the travel time benefits of taking an alternative mode instead of the *Missouri River Runner*.

TABLE 3.3 ANNUAL ESTIMATED TRAVEL TIME COST FOR *MISSOURI RIVER RUNNER* VS. ALTERNATIVE MODES, 2018 (MILLIONS)

	Missouri River Runner		Automobile		Air		Intercity Bus		Alternative Modes Total	
Station	Travel Time (hours)	Value of Time Cost	Travel Time (hours)	Value of Time Cost	Travel Time (hours)	Value of Time Cost	Travel Time (hours)	Value of Time Cost	Travel Time (hours)	Value of Time Cost
Kansas City	173,526	$2.88	87,722	$1.46	11,881	$0.20	26,134	$0.43	125,737	$2.09
Independence	12,893	$0.21	6,552	$0.11	1,395	$0.02	1,442	$0.02	9,389	$0.16
Lee's Summit	52,998	$0.88	36,783	$0.61	–	–	–	–	36,783	$0.61
Warrensburg	17,707	$0.29	13,589	$0.23	–	–	–	–	13,589	$0.23
Sedalia	11,852	$0.20	8,389	$0.14	–	–	–	–	8,389	$0.14
Jefferson City	49,233	$0.82	31,320	$0.52	–	–	8,108	$0.13	39,428	$0.65
Hermann	30,246	$0.50	22,666	$0.38	–	–	–	–	22,666	$0.38
Washington	19,001	$0.32	14,385	$0.24	–	–	–	–	14,385	$0.24
Kirkwood	96,784	$1.61	52,639	$0.87	7,734	$0.13	13,267	$0.22	73,640	$1.22
St. Louis	140,574	$2.33	71,279	$1.18	10,139	$0.17	21,236	$0.35	102,654	$1.70
Total	**604,814**	**$10.04**	**345,325**	**$5.73**	**31,149**	**$0.52**	**70,187**	**$1.15**	**446,660**	**$7.26**

3.4 Carbon Dioxide Emissions Cost Savings

Carbon dioxide cost savings were calculated by multiplying the average mileage from each *Missouri River Runner* station by ridership by mode[16] (see Table 2.8) and the amount of kilograms of CO_2 emitted per passenger mile by mode (see Table 2.4). The resulting emissions levels for each mode were then converted into dollar amounts using the social cost of carbon cost per metric ton of CO_2 (as of January 2020), which the team evaluated at $1.00 per metric ton, as shown in Table 3.4. As a formula, this is equivalent to:

*Carbon Emissions = Average Mileage from Each Station * Station Ridership * kg CO_2 per passenger mile * Social Cost of Carbon*

Once again, using the 40,411 passengers departing from Kansas City on Amtrak (Table 2.8) traveling an average of 214 miles (Table 2.9), the 0.1 kg CO_2 emitted per passenger mile results in:

*$967 Carbon Emissions = 214 miles * 40,411 passengers * (0.1 kg CO_2 per passenger mile/1000) * $1/ kg CO_2*

The CO_2 emissions associated with Amtrak ridership total $3,370 annually and the CO_2 emissions associated with alternative modes total $5,127 annually.

The CO_2 emissions cost savings due to *Missouri River Runner* ridership totals $1,757 annually.

TABLE 3.4 ANNUAL ESTIMATED CARBON DIOXIDE EMISSIONS COSTS FOR *MISSOURI RIVER RUNNER* VS. ALTERNATIVE MODES, 2018

Station	*Missouri River Runner*	Automobile	Intercity Bus	Air	Alternative Modes Total
Kansas City	$967	$1,159	$101	$175	$1,435
Independence	$72	$84	$5	$18	$108
Lee's Summit	$295	$481	–	–	$481
Warrensburg	$99	$169	–	–	$169
Sedalia	$66	$106	–	–	$106
Jefferson City	$274	$378	$29	–	$407
Hermann	$169	$272	–	–	$272
Washington	$106	$173	–	–	$173
Kirkwood	$539	$673	$50	$92	$815
St. Louis	$783	$939	$82	$142	$1,162
Total	**$3,370**	**$4,434**	**$267**	**$426**	**$5,127**

[16] Note that VMT was not used here as the CO_2 factors are expressed as per passenger mile.

3.5 Fatalities Cost Savings

Changes in fatalities were based on VMT per mode and station (average mileage from each *Missouri River Runner* station multiplied by ridership by mode, see Table 2.8) multiplied by estimated fatality rates by mode (see Table 2.5). Overall, there is an estimated reduction of 0.162 fatalities due to *Missouri River Runner* ridership, which amounts to $1.4 million annually in fatalities cost savings. The formula for this is as follows:

*Fatality by Mode = VMT * Fatality Rate*

For the 3,370,443 automotive VMT associated with Kansas City ridership switching from *Missouri River Runner* Service, this is equivalent to:

*0.040 Fatalities = 3,370,443 VMT * 1.20 Fatalities per 100 million passenger miles*

Travel by personal motor vehicle has the highest fatality rate and associated estimated fatalities costs, which comprises the most cost savings due the high proportion of riders choosing to drive if *Missouri River Runner* service was unavailable.

TABLE 3.5 ANNUAL ESTIMATED FATALITIES BY MODE, 2018

		Alternative Modes			
Station	***Missouri River Runner***	**Automobile**	**Intercity Bus**	**Air**	**Total**
Kansas City	0.003	0.040	0.000	0.000	0.040
Independence	0.000	0.003	0.000	0.000	0.003
Lee's Summit	0.001	0.017	–	–	0.017
Warrensburg	0.000	0.006	–	–	0.006
Sedalia	0.000	0.004	–	–	0.004
Jefferson City	0.001	0.013	0.001	–	0.015
Hermann	0.001	0.010	–	–	0.010
Washington	0.000	0.006	–	–	0.006
Kirkwood	0.002	0.023	0.002	0.000	0.026
St. Louis	0.003	0.033	0.004	0.000	0.037
Total	**0.012**	**0.155**	**0.008**	**0.000**	**0.162**
Total Est. Fatalities Cost	*$115,988*	*$1,485,553*	*$73,879*	*$0*	*$1,443,444*

3.6 Tourism & Visitor Spending

Tourism and visitor spending are largely comprised of lodging and food/sightseeing costs. Expenditures will vary depending on the purpose of the trip, the length of the trip and whether the station is in an urban or rural location,

as discussed in Section 2.3. These values are determined by multiplying the ridership by trip purpose by the anticipated spending (Table 2.11). The following formula summarizes this calculation:

*Tourism and Visitor Spending = Ridership by Purpose * Average Expenditure*

In the case of the 10% of travelers from Kansas City (Table 2.7) using the *Missouri River Runner* for business purposes, the expected spending is as follows:

*$440,480 in Hotel Expenditures = 10% * 40,411 total riders * $109/day*

Table 3.6 presents the estimated hotel spending based on *Missouri River Runner* ridership by station. *Missouri River Runner* riders spend an estimated $21.8 million annually, with almost half incurred in connection with trips to visit family and friends ($11.4 million). The Kansas City station has the highest ridership in an urban area; the team estimates that the station has the highest total spending by station with over $5.5 million.

Table 3.7 presents the estimated food and sightseeing spending based on *Missouri River Runner* ridership by station. *Missouri River Runner* passengers spend an estimated $25.3 million annually, most occurring during visits to family and friends ($13.8 million). Similar to the hotel spending, the team estimates that Kansas City has the highest total spending by station ($6.1 million) given its location and high ridership.

The combined impact of tourism and visitor spending in Missouri based on *Missouri River Runner* ridership totals $47.1 million annually.

TABLE 3.6 ANNUAL ESTIMATED HOTEL SPENDING BASED ON *MISSOURI RIVER RUNNER* RIDERSHIP, 2018 (THOUSANDS)

Station	Daily commute to/from work	Business travel	Travel to/from school	Visit family or friends	Vacation (>1 week)	Leisure or recreation (e.g., dining, long weekend)	Personal or family (e.g., wedding)	Shopping	Total
Kansas City	$0	$440	$0	$3,213	$1,233	$429	$198	$0	$5,515
Independence	$0	$4	$0	$98	$145	$99	$84	$0	$429
Lee's Summit	$0	$298	$0	$778	$313	$336	$11	$0	$1,737
Warrensburg	$0	$28	$0	$392	$19	$21	$8	$0	$468
Sedalia	$0	$21	$0	$189	$224	$128	$26	$0	$588
Jefferson City	$0	$218	$0	$1,588	$610	$212	$98	$0	$2,725
Hermann	$0	$178	$0	$422	$623	$267	$151	$0	$1,642
Washington	$0	$7	$0	$388	$128	$120	$109	$0	$753
Kirkwood	$0	$305	$0	$1,592	$855	$344	$137	$0	$3,233
St. Louis	$0	$376	$0	$2,742	$1,053	$366	$169	$0	$4,706
Total	**$0**	**$1,876**	**$0**	**$11,402**	**$5,203**	**$2,322**	**$993**	**$0**	**$21,796**

TABLE 3.7 ANNUAL ESTIMATED FOOD & SIGHTSEEING SPENDING BASED ON *MISSOURI RIVER RUNNER* RIDERSHIP, 2018 (THOUSANDS)

Station	Daily commute to/from work	Business travel	Travel to/from school	Visit family or friends	Vacation (>1 week)	Leisure or recreation (e.g., dining, long weekend)	Personal or family (e.g., wedding)	Shopping	Total
Kansas City	$0	$348	$0	$3,892	$973	$740	$156	$38	$6,148
Independence	$0	$3	$0	$118	$114	$170	$67	$3	$475
Lee's Summit	$0	$235	$0	$942	$247	$579	$9	$13	$2,026
Warrensburg	$0	$30	$0	$477	$21	$40	$9	$5	$581
Sedalia	$0	$23	$0	$230	$241	$244	$28	$4	$770
Jefferson City	$0	$172	$0	$1,924	$481	$366	$77	$19	$3,038
Hermann	$0	$192	$0	$512	$672	$510	$163	$11	$2,062
Washington	$0	$8	$0	$472	$138	$230	$118	$7	$972
Kirkwood	$0	$241	$0	$1,928	$675	$593	$108	$395	$3,940
St. Louis	$0	$297	$0	$3,322	$830	$632	$133	$32	$5,247
Total	**$0**	**$1,548**	**$0**	**$13,817**	**$4,393**	**$4,105**	**$869**	**$528**	**$25,259**

3.7 Amtrak Employment, Payroll and Expenditures

According to Amtrak's State of Missouri Fact Sheet for Fiscal Year 2019,[17] Amtrak employed 78 people statewide with total wages of $7,472,407 (an average of $95,800 per employee). In addition, Amtrak provided detailed vendor spending by city in Missouri during FY2019. This spending, a total of $28.9 million, supports the operations of the *Missouri River Runner*, other facilities and lines in the state as well as operations elsewhere across Amtrak's national network. The majority of spending went to one vendor in Grain Valley, Missouri that manufactures railroad signaling products, totaling over $12 million in 2019, as shown in Table 3.8. Other major vendors include a locomotive servicer ($3.9 million), a petroleum provider ($3.7 million) and a railroad contractor ($2.8 million). Fourteen vendors located in North Kansas City and St. Louis received significant Amtrak spending totaling $4.7 million and $4.4 million, respectively. The economic impact assessment for Amtrak's presence in Missouri, discussed in Table 4.2, uses these estimates in the valuation.

TABLE 3.8 AMTRAK VENDOR SPENDING BY CITY, MISSOURI, FY 2019

City	Amtrak Spending (FY 2019)	Percent of Total
Grain Valley	$12,117,557	42%
North Kansas City	$4,707,487	16%
St Louis	$4,445,945	15%
St Joseph	$2,820,404	10%
Kansas City	$2,424,977	8%
Riverside	$823,266	3%
Crystal City	$294,568	1%
Chesterfield	$185,985	0.6%
Nixa	$172,342	0.6%
Independence	$142,432	0.5%
Troy	$136,200	0.4%
All Others[18]	$589,307	2%
Total	**$28,860,472**	**100%**

Source: Amtrak.

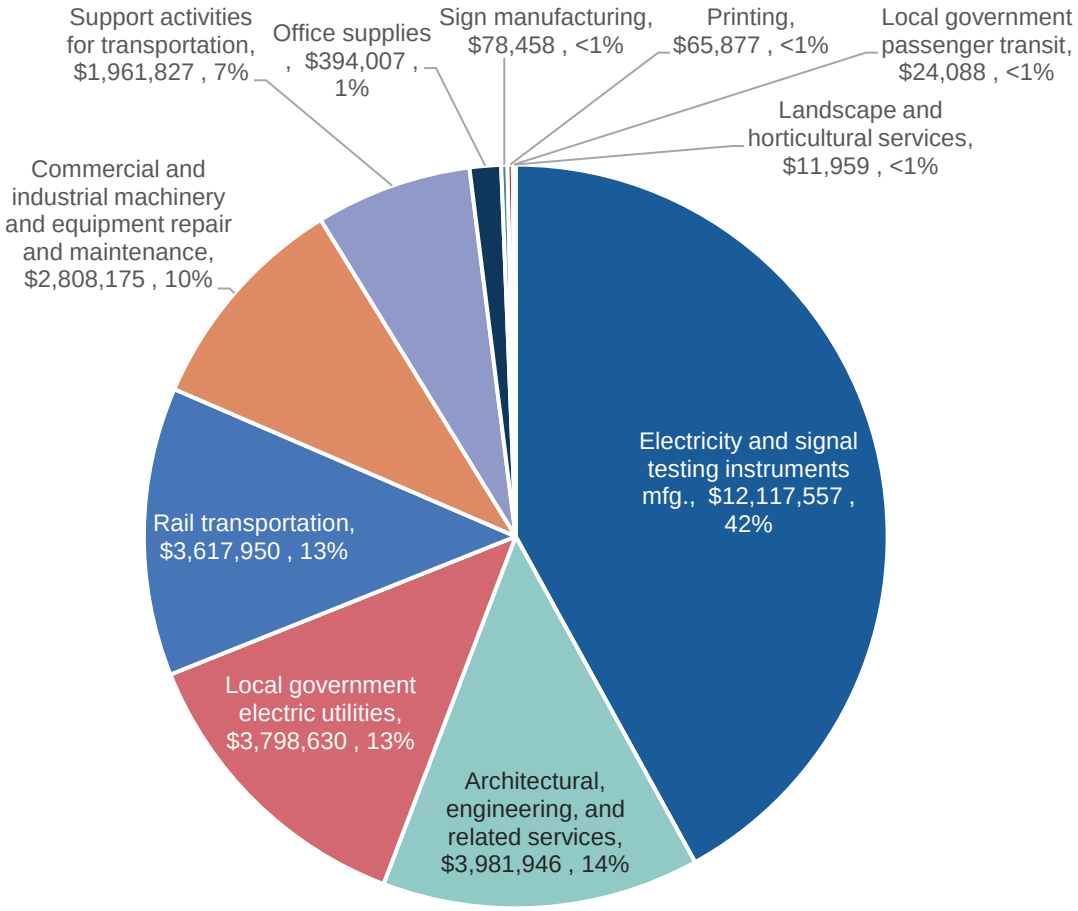
As noted, the largest single category of Amtrak vendor spending in 2019 was railroad signaling equipment, totaling $12.1 million or 42% of total spending. A significant amount of spending went to architectural and engineering services ($4 million or 14%), local utilities providers ($3.8 million or 13%) and railroad transportation services ($3.6

[17] https://www.amtrak.com/content/dam/projects/dotcom/english/public/documents/corporate/statefactsheets/MISSOURI19.pdf

[18] "All Others" includes Liberty, Fenton, Columbia, O'Fallon, Springfield, Maryland Heights, Wellington, Washington, Warrensburg, La Plata, Sedalia, Aurora, Poplar Bluff, Bonne Terre, Grandview, Florissant, High Ridge, Raytown and Sullivan. These cities are here listed in descending order of spending with the most spending occurring in Liberty and the least in Sullivan.

million or 13%). Figure 3.1 shows a complete breakdown of vendor spending by industrial sector, which served as the basis for spending categorization in the IMPLAN economic impact model.

FIGURE 3.1 AMTRAK VENDOR SPENDING CATEGORIES, MISSOURI, FY2019



Source: Amtrak.

4.0 Economic Impacts

This section summarizes the economic impacts of tourism and visitor spending of *Missouri River Runner* riders in Missouri as well as the economic impacts of Amtrak's presence in Missouri, including employment, payroll and vendor expenditures. Economic impacts were estimated using the 2018 IMPLAN economic impact model for the state of Missouri, with estimates reported in 2018 dollars.

4.1 Impact of Tourism & Visitor Spending

As discussed in Section 3.6, tourists and visitors traveling via the *Missouri River Runner* spent approximately $21.8 million on hotels and $25.3 million on food and sightseeing in 2018. This spending supports nearly 802 jobs, $30 million in labor income, $47.5 million in Gross State Product or value added, $86 million in output and $11 million in state and local tax revenue, as shown in Table 4.1.

TABLE 4.1 SUMMARY OF ANNUAL ECONOMIC IMPACTS OF TOURISM & VISITOR SPENDING, 2018 (MILLIONS)

Impact	Employment	Labor Income (2018$)	Value Added (2018$)	Output (2018$)	Tax Revenue (2018$)
Direct	549	$17.3	$26.5	$46.2	$6.7
Indirect	121	$6.4	$10.0	$20.1	$2.0
Induced	132	$6.3	$11.0	$19.6	$2.3
Total	**802**	**$30.0**	**$47.5**	**$86.0**	**$11.0**

4.2 Impact of Amtrak Employment & Expenditures

As discussed in Section 3.7, Amtrak employs 78 people with an estimated $7.5 million in payroll in Missouri. Amtrak also spent $28.9 million at its stations and surrounding assets, covering services such as landscaping, engineering, rail transportation, maintenance and utilities, among other vendors. The cumulative effect of Amtrak's presence in Missouri supports 450 jobs, $35.2 million in labor income, $64.8 million in GSP or value added, $122.5 million in output and $11.3 million in state and local tax revenue, as shown in Table 4.2.

TABLE 4.2 SUMMARY OF ANNUAL ECONOMIC IMPACTS OF AMTRAK EMPLOYMENT AND EXPENDITURES, 2018 (MILLIONS)

Impact	Employment	Labor Income (2018$)	Value Added (2018$)	Output (2018$)	Tax Revenue (2018$)
Direct	137	$17.7	$35.7	$69.9	$4.8
Indirect	158	$10.3	$16.3	$29.7	$3.8
Induced	155	$7.3	$12.8	$23.0	$2.7
Total	**450**	**$35.3**	**$64.8**	**$122.6**	**$11.3**

Appendix A. Passenger Station Survey Responses

A.1 Hermann

4. What is the trip purpose for most *Missouri River Runner* riders at your station? Are they primarily traveling for work/business, personal or vacation/recreation?

- Most of the riders coming to Hermann are leisure travelers, coming for vacation/recreation.
- However, we have just begun our marketing efforts to business travelers to entice small group meetings, small conferences & workshops, team building getaways for corporations large and small, etc. We have so much to offer to this market, and having the Amtrak accessibility from St. Louis, Kansas City and Springfield, Illinois will allow us to target businesses in those major metro areas to ride the Amtrak then have a business meeting in Hermann.
- I do know that we have a lawyer who lives here in the Hermann area, and he rides the Amtrak to St. Louis quite often.
- I also know of a lady from Kansas City who owns two businesses here in Hermann, and she rides the Amtrak from KC to Hermann on Tuesdays (pre-COVID) almost weekly.
- We also have groups that are coming in for weddings that ride the train.

5. What are the primary tourism attractions/destinations that draw *Missouri River Runner* passengers to your station?

- Top tourism attractions for *Missouri residents:*
  - Wineries
  - Our diverse lodging businesses (Bed and Breakfasts, guest houses, inns, boutique hotels)
  - Festivals (Oktoberfest)
- Top tourism attractions for *tourists/out-of-state visitors:*
  - Same as above

6. Is there a capital improvement plan or project list for your station over the next 5-10 years? What are the highest priority projects?

- There really isn't a written plan; however, I can tell you that we need to do something about our parking lot. It is in really rough shape. The gravel that we put down last year helped; however, we need a long-term plan for this area.

- Also, I am considering adding some counter tops along the north windows so that people can work on the internet on their laptops/iPads while waiting on the train. I think having some tables and/or counter tops would be very helpful.
- I know those aren't necessarily capital improvements, but they are improvements.

7. What are the biggest challenges for the station (i.e. ridership, O&M, capital improvements, accessibility, etc.)?

- Our biggest challenge right now is to get it staffed to welcome visitors on/off the train and to educate visitors coming to Hermann (who come into the train station to use the restroom) that we actually have Amtrak service. Yes, ridership is a challenge during the week, but if we can get past COVID and increase our marketing efforts, more people will utilize the train. If less people are traveling via plane, they are looking at other options for travel.

8. What are the biggest opportunities to increase ridership at your station?

- We want to increase our marketing to families to bring three and four generations on the train for a day trip or an overnight trip to Hermann.
- As stated above, we really see that marketing to the business travelers and group travelers will help increase ridership.

A.2 Independence

1. What is the trip purpose for most *Missouri River Runner* riders at your station? Are they primarily traveling for work/business, personal or vacation/recreation?

- Primarily our riders are traveling for person/vacation/recreation.

2. What are the primary tourism attractions/destinations that draw *Missouri River Runner* passengers to your station?

- Top tourism attractions for *Missouri residents:*
  - Truman Library
  - Truman Home
  - Historic Independence Square
  - Independence Center (Indoor Mall)
  - Bass Pro Shop
  - National Frontier Trails Museum
  - Vaile Mansion
  - Bingham-Waggoner Estate
  - Pioneer Trails Adventures

» Top tourism attractions for *tourists/out-of-state visitors:*

- Truman Library
- Truman Home
- Independence Visitors Center – the Church of Jesus Christ of Latter Days Saints (historic sites)
- Community of Christ – World Headquarters (Temple, Auditorium, historic sites)
- National Frontier Trails Museum
- Leila's Hair Museum
- Vaile Mansion
- Bingham-Waggoner Estate
- 1857 Jail & Marshalls Home
- Pioneer Trails Adventures

3. Is there a capital improvement plan or project list for your station over the next 5-10 years? What are the highest priority projects?

» Restoration Project – will return the station to 1948-era when President Harry S. Truman was on his 'Whistle Stop Tour'. It will become a museum and area of interest. When complete, the depot will be on a trail (walking, bicycling) that will connect to the National Frontier Trails Museum Complex, the Bingham Waggoner Estate and the uptown Independence Square.

4. What are the biggest challenges for the station (i.e. ridership, O&M, capital improvements, accessibility, etc.)?

» Biggest challenges are:

- Ridership
- Isolated location
- Preconceived notions about depot

5. What are the biggest opportunities to increase ridership at your station?

» Safety due to isolated location

A.3 Kirkwood

1. What is the trip purpose for most *Missouri River Runner* riders at your station? Are they primarily traveling for work/business, personal or vacation/recreation?

» All listed.

2. What are the primary tourism attractions/destinations that draw *Missouri River Runner* passengers to your station?

» Top tourism attractions for *Missouri residents*: Magic House, Museum of Transportation, Kirkwood Farmers Market, Downtown Kirkwood Shopping, Kirkwood festivals and a new theater for plays opening soon.

» Top tourism attractions for *tourists/out-of-state visitors*: All the above plus Cardinals baseball, Blues Hockey, St. Louis FC

3. Is there a capital improvement plan or project list for your station over the next 5-10 years? What are the highest priority projects?

» New station platform funded by Amtrak. Station rehabilitation ($3.8 million project) funded by City of Kirkwood and fund-raising campaign by Historic Kirkwood Train Station Foundation.

4. What are the biggest challenges for the station (i.e. ridership, O&M, capital improvements, accessibility, etc.)?

» Capital improvements and state funding of Amtrak trains.

5. What are the biggest opportunities to increase ridership at your station?

» Addition of a hotel in the downtown Kirkwood area and expanding promotion of our festivals and events.

A.4 Lee's Summit

1. What is the trip purpose for most *Missouri River Runner* riders at your station? Are they primarily traveling for work/business, personal or vacation/recreation?

» We don't have any ridership data other than the ticket information provided by MoDOT. We are the third busiest station on the line. Anecdotal evidence supports a mix of business and leisure travel, though we have heard that the schedule and on-time performance are limiting for business travelers.

2. What are the primary tourism attractions/destinations that draw *Missouri River Runner* passengers to your station?

» The primary attraction for Amtrak passengers is our award-winning historic downtown district. The Lee's Summit Amtrak station is located right in the heart of the downtown Lee's Summit. Downtown Lee's Summit, a Great American Main Street and Great American Neighborhood, boasts locally owned specialty shops and an eclectic array of casual and fine dining on the historic bricks of the central business district. Downtown is a must for those looking for shopping, entertainment and historic character. From boutique clothing and accessories, to home furnishings and specialty items, you're sure to find a new treasure. In addition to downtown Lee's Summit, visitors are drawn to Lee's Summit for its top-rated attractions, extensive parks system and outdoor activities, convenient lodging options, diverse culinary scene and much more!

» Lee's Summit is also home to attractions like Paradise Park Family Entertainment Center, Unity Village Retreat and Conference Center, Lee's Summit Symphony, Lee's Summit Airport, art galleries, amazing parks, trails and more.

» LS also has well-known large festivals, host major youth sporting events and is centrally located to major regional attractions while being a safe station location. Regional riders can park in LS and take the train to KC attractions or to destinations east on line and not worry about the safety of their vehicles, etc. in the way they might at stations more westerly on line.

» More info can be found at https://www.lstourism.com/

3. Is there a capital improvement plan or project list for your station over the next 5-10 years? What are the highest priority projects?

» We have invested a lot into repairs and improvements to platform, waiting shelter and restrooms, including recently installed security cameras.

In the next 5-10 years (listed in priority):

– Demo old platform and install new platform with new design layout that would hold up better to the train vibrations (Approx. Est. unknown would need to get quotes and new design layout)

– Remove/install new roof on waiting area and restrooms (Approx. Est. $3500.00) Lee's Summit is only Station on line that doesn't have a fully enclosed, climate controlled, secure facility (just a "bus waiting" style shelter and park style restrooms). We also do NOT have a ticketing kiosk or options on site.

– Install new stainless-steel toilet and sink in north side restroom (Approx. Est. $3500.00)

– Repair and repaint all trim and soffits (Approx. Est. $1500)

4. What are the biggest challenges for the station (i.e. ridership, O&M, capital improvements, accessibility, etc.)?

» Lack of secure station facility/rider amenities, no onsite ticketing option, platform condition, vandalism of restrooms and improper use of waiting area and restrooms by vagrants. Trip schedules and impacts to on-time performance are also challenging. Also, our current bus shelter style "station" does not provide for adequate social distancing for riders so they must stand out in elements.

5. What are the biggest opportunities to increase ridership at your station?

» Add onsite ticketing, increase marketing (local and larger), update facility to offer information and services to riders and add signage/directions to long-term parking for riders.

» Lee's Summit continues to grow and offers a lot of opportunities to increase ridership. A new, large, luxury multi-family housing development is being constructed just blocks from station. This provides a great opportunity for new riders.

A.5 Sedalia

1. What is the trip purpose for most *Missouri River Runner* riders at your station? Are they primarily traveling for work/business, personal or vacation/recreation?

» Most riders using the Sedalia station are doing so for vacation/recreation. Secondary is personal – traveling to and from family members.

2. What are the primary tourism attractions/destinations that draw *Missouri River Runner* passengers to your station?

» Top tourism attractions for *Missouri residents*: Katy Trail, Sedalia's Historic Districts, Katy Depot Heritage Site and the Missouri State Fair

» Top tourism attractions for *tourists/out-of-state visitors*: Same answer.

3. Is there a capital improvement plan or project list for your station over the next 5-10 years? What are the highest priority projects?

» We are currently rebuilding the streetscape at the station and increasing parking capacity. We intend to lease additional space in the building to expand the OATS Regional Transportation office.

» The station was renovated and completed in 2007, and thus no capital improvements have been identified in the next 5-10 years. The City of Sedalia is in the process of taking ownership of the property from Sedalia Downtown Development and anticipates that transfer to be complete by mid-summer. The City is committed to maintaining the facility and providing the lobby for Amtrak passengers.

4. What are the biggest challenges for the station (i.e. ridership, O&M, capital improvements, accessibility, etc.)?

» The biggest challenge is how to increase usage and ridership.

5. What are the biggest opportunities to increase ridership at your station?

» If the communities cross-marketed packages to their residents, we could increase ridership between the smaller destinations. For example, Sedalia teams with Kirkwood in June, and we cross-promote weekend trips. At the same time, Warrensburg teams with Washington, etc., knowing that our residents are going to Kirkwood while we welcome Kirkwood residents to Sedalia – in essence, a sister city for the month.

A.6 Warrensburg

1. What is the trip purpose for most *Missouri River Runner* riders at your station? Are they primarily traveling for work/business, personal or vacation/recreation?

» The majority of the passengers seem to be college students attending the University of Central Missouri.

» Often, people take day trips from our station to other communities especially individuals visiting family members who are associated with Whiteman Air Force Base.

2. What are the primary tourism attractions/destinations that draw *Missouri River Runner* passengers to your station:

» Top tourism attractions for *Missouri residents:*

– Old Drum, who is recognized as the state's Historical Dog.

– UCM activities or Whiteman Air Force base Wings Over Whiteman Air Show.

– A vibrant downtown area.

» Top tourism attractions for *tourists/out-of-state visitors:*

– Individuals who are visiting family or friends at Whiteman Air Force Base.

3. Is there a capital improvement plan or project list for your station over the next 5-10 years? What are the highest priority projects?

» To seal the quarry stone on the outside of the depot.

» To replace windows on north side of building.

4. What are the biggest challenges for the station (i.e. ridership, O&M, capital improvements, accessibility, etc.)?

» Capital improvements.

» Increasing ridership.

5. What are the biggest opportunities to increase ridership at your station?

» A change of schedule. The current schedule does not allow for day trips to Kansas City and back with a reasonable amount of time in between. The schedule also is not flexible for work commuters.

A.7 Washington

1. What is the trip purpose for most *Missouri River Runner* riders at your station? Are they primarily traveling for work/business, personal or vacation/recreation?

» Most are traveling for either personal or vacation/recreation purposes. We have a lot of college kids (who go to school in Warrensburg) who take the train to and from school. We also have a good number of people who come for a weekend or day trip.

2. What are the primary tourism attractions/destinations that draw *Missouri River Runner* passengers to your station:

» Top tourism attractions for *Missouri residents*:

– Downtown shopping

– Iron Spike Model Train Museum

– Washington Historical Society Museum

  - Missouri Meerschaum Company (Corn Cob Pipe Factory)
  - Gary R. Lucy Gallery

» Top tourism attractions for *tourists/out-of-state visitors:*

  - Street Festivals (BBQ, Bikes and Blues, Art Fair and Winefest, Fall Festival of the Arts and Crafts, etc.)
  - The Washington Town & Country Fair
  - Missouri Meerschaum Company (Corn Cob Pipe Factory)
  - Gary R. Lucy Gallery

3. Is there a capital improvement plan or project list for your station over the next 5-10 years? What are the highest priority projects?

» We assess potential improvements from year-to-year.

4. What are the biggest challenges for the station (i.e. ridership, O&M, capital improvements, accessibility, etc.)?

» We would definitely like to see more ridership. We have quite a few riders throughout the year, but there is always room to grow. We have a lot to offer in Washington, and we would like for more and more people to get the chance to see that!

5. What are the biggest opportunities to increase ridership at your station?

» To promote our stop along the *Missouri River Runner* in all of our advertising opportunities.

» To show off our street festivals that take place steps from the train depot, which would make riding the *Missouri River Runner* to Washington, the perfect opportunity.

» To gear our marketing efforts to the appropriate audiences.